

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

~~Is/~~re Application of:

Mark I. Gardner et al.

Serial No. 09/207,972

Filed: December 9, 1998

For: Ultrathin High-K Gate Dielectric
with Favorable Interface Properties
for Improved Semiconductor Device
Performance

§ Group Art Unit: . 2815

§ Examiner: Warren, Matthew E.

§ Atty. Dkt. No.: 5500-36101

TT2823CPA

CERTIFICATE OF MAILING
37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below:

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REPLY BRIEF

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Sir/Madam:

In response to the Examiner's Answer of June 11, 2003, Appellants present this Reply Brief.

Appellants response to the points made in the Examiner's Answer are as follows:

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REMARKS

In the Appeal Brief, Appellants argued that the primary reference used in the Examiner's rejection (U.S. Patent No. 6,320,238 to Kizilyalli et al.) is not prior art to Appellants' application. The Kizilyalli patent was filed after the filing of Appellants' application. The Kizilyalli patent is a continuation-in-part of application no. 08/995,435 which was filed prior to the filing date of Appellants' application. Therefore, material from the Kizilyalli patent is only prior art to Appellants' application if it is entitled to the filing date of its parent application. In the Appeal Brief, Appellants noted two reasons why the relied-upon reference is not prior art, as summarized below:

1. A patent that was filed as a continuation-in-part application is only entitled to the filing date of its parent application as a prior art date if it has a claim supported by the parent application. *See* M.P.E.P. § 2136.03(IV). As pointed out in the Appeal Brief, all of the claims in the Kizilyalli patent include limitations not supported in the parent application. Since no claim in the Kizilyalli patent is supported in its parent application, the Kizilyalli patent is not entitled to the filing date of its parent application. Thus, the Kizilyalli patent is not prior art to Appellants' application.

2. Only the material that is common to both the Kizilyalli patent and its parent is eligible as potential prior art. *In re Wertheim*, 209 USPQ 554 (CCPA 1981). The Examiner relies on the structure illustrated in Fig. 1 of the Kizilyalli patent to reject Appellants' claims. However, Fig. 1 of the Kizilyalli patent illustrates an embodiment in which the gate electrode 104 is disposed directly on the high-k dielectric material 103 and in which the equivalent electrical thickness of the dielectric material layer is 2.2 nm or less. This embodiment is not described nor enabled in the Kizilyalli patent's parent application. Therefore, the material in the Kizilyalli patent used to reject Appellants' claims is not prior art to Appellants' application.

In regard to Appellants first reason why Kizilyalli is not prior art, the Examiner responds in his Answer that whether or not certain limitations of the claims in the

Kizilyalli patent are supported in its parent is irrelevant because these limitations are not included in the claims on appeal. The Examiner is clearly incorrect in his reasoning. To have an effective prior art date of the parent application, all limitations of a claim in the Kizilyalli patent must be supported in the parent application. Whether or not any of Appellants' claims include any of these limitations is irrelevant to this requirement. The Examiner has never even attempted to show that any claim of the Kizilyalli patent is supported in its parent. As shown in Appellants' Appeal Brief, none of the claims of the Kizilyalli patent are supported in its parent, and thus the Kizilyalli patent is not prior art to Appellants' application.

In response to Appellants' second argument, the Examiner states in his Answer: "If fig. 1 of the Kizilyalli parent application were used in the rejection as suggested by the appellant, then the limitations of the appellant's claim 1 would be shown ..." (emphasis added). First of all, Appellants have never suggested that fig. 1 of the Kizilyalli parent application should or could be used in the rejection. Secondly, the Examiner has never made a rejection based on the Kizilyalli parent application. The final rejection was based on the Kizilyalli patent, which Appellants have shown is not prior art. Any rejection based on the Kizilyalli parent application would be a new grounds of rejection. To make a new ground of rejection at this point, the Examiner would have to re-open prosecution per 37 CFR 1.193. Finally, no rejection can be made based on the Kizilyalli parent application because the Kizilyalli parent application does not qualify as prior art. The Kizilyalli parent application is not a published application as defined in 35 U.S.C. § 102(e) and would not appear to qualify as prior art under any other section of 35 U.S.C. Only a patent issuing from the Kizilyalli parent application could potentially be used as prior art. However, for the reasons given above, the Kizilyalli patent used in the rejection does not qualify as prior art. Appellants do note that after the present appeal was filed, another patent has issued from the Kizilyalli parent application no. 08/995,435. U.S. Patent 6,548,854 issued to Kizilyalli et al. on April 15, 2003. However, any rejection based on this patent would constitute a new ground of rejection for which prosecution would have to be re-opened per 37 CFR 1.193.

CONCLUSION

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 16-21, 23, 30 and 31 was erroneous, and reversal of the Examiner's decision is respectfully requested.

This Reply Brief is submitted in triplicate along with the following items:

- ☒ Return Receipt Postcard
- ☒ Information Disclosure Statement, Form PTO-1449 and cited reference.

Respectfully submitted,



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